

PATENT APPLN. NO. 10/524,892
RESPONSE UNDER 37 C.F.R. §1.111

PATENT
NON-FINAL

REMARKS

Claim Rejections - 35 USC § 102

Claims 1-5, 7, 10-11, 13-17 and 40 are rejected under 35 U.S.C. § 102 as being anticipated by Kasai et al. (US 4,776,959).

Claim Rejections - 35 USC § 103

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kasai et al. (US 4,776,959) as applied to claim 1 in view of Graiver et al. (US 5,429,839).

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kasai et al. (US 4,776,959) as applied to claim 7 in view of Nagamoto et al. (US 5,023,052).

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kasai et al. (US 4,776,959).

Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kasai et al. (US 4,776,959) as applied to claim 1 in view of Ricketts et al. (US 2,715,091).

Claim 18 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawaguchi et al. (US 5,658,466) in view of Aoyagi et al. (US 4,609,464).

The claims have been amended to overcome the rejections by canceling claim 18 and amending the remaining claims to delete the term "soluble" and to recite the modified substrate of the

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invention in terms of a hydrophilic polymer bonded to a surface of a precursor substrate to an extent that a ratio of the hydrophilic polymer of the modified substrate that is not bonded to the surface of the precursor substrate (referred to in the specification as the "soluble" polymer) to the total of the hydrophilic polymer of the modified substrate is 15 weight percent or less and a number of adhered human blood platelets is $10/4.3 \times 10^3 \mu\text{m}^2$ or less when the modified substrate is brought into contact with human blood which contains heparin with a concentration of 50 U/mL at 37°C for one hour.

As described on page 5, line 6, to page 6, line 10, of the present application, a substrate (recited in the amended claims as a "precursor" substrate to distinguish over the modified substrate) is irradiated with radiation while the precursor substrate is brought into contact with an aqueous solution of a hydrophilic polymer, thus producing a modified substrate wherein the hydrophilic polymer is immobilized on, i.e., bonded to (page 5, lines 19-20), the surface of a precursor substrate. This is essential because, in the present invention, a hydrophilic polymer bonded on the surface of a the surface of a precursor substrate eliminates proteins or blood platelets due to its molecular motion.

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Kasai, the primary reference in each of the rejections of the remaining claims (that have not been withdrawn), discloses only that a hydrophilic polymer may be cross-linked by itself. Kasai does not disclose bonding a hydrophilic polymer to a substrate or irradiating a substrate with radiation while the substrate is brought into contact with an aqueous solution of a hydrophilic polymer. The hydrophilic polymer of Kasai is not bonded to a substrate.

Removal of the rejections and an allowance of the application is believed to be in order and is respectfully solicited.

The foregoing is believed to be a complete and proper response to the Office Action dated September 25, 2008.

In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension and any additional required fees may be charged to our Deposit Account No. 111833.

Respectfully submitted,
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